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1982 Census of Mineral Industries

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CRUDE PETROLEUM AND NATURAL GAS (Industry 1311)

This report presents preliminary statistics from the 1982 Census of Mineral Industries. The 1982 data are subject to change in the final reports, which will be issued at a later date. Final data will be presented first in paperbound reports and then in a bound volume of Subject, Industry, and Geographic Area Statistics. The final volume will include a comprehensive discussion of the concepts and definitions used in the census.

The total value of shipments and receipts for Industry 1311, Crude Petroleum and Natural Gas, was \$137,431 million in 1982, while the value of shipments of products classified as being primary to this industry was \$137,016 million. Value added by mining was \$127,211 million. Total employment for the industry increased to 261.4 thousand employees in 1982, an increase of approximately 87 percent from 1977. Establishments in this industry are those primarily engaged in operating oil and gas field properties. Such activities include exploration for crude petroleum and natural gas; drilling, completing and equipping wells; operation of separators, emulsion breakers, desilting equipment; and all other activities in the preparation of oil and gas up to the point of shipment from the producing property. This industry also includes production of oil through the mining and extraction of oil from oil shale and oil sands, and coal gasification. Production of natural gas liquids is classified in Industry 1321, Natural Gas Liquids.

For census purposes, a crude petroleum or natural gas establishment covers all onshore oil and gas field activities of an operating company in an entire State; offshore areas adjacent to a State, e.g., California, Louisiana, Alaska, and Texas; or offshore areas adjacent to several States, e.g., Pacific, Northern Gulf of Mexico, North and Mid-Atlantic and South Atlantic. Separate survey reports were required for each State or offshore area in which a company operated. Reports were obtained from the operators of oil and gas field properties whether or not they owned the properties operated. In many cases, these reports covered the operation of both oil and gas and gas-condensate wells.

Establishment data were tabulated based on industry definitions contained in the 1972 Standard Industrial Classification (SIC) Manual and its 1977 supplement.¹ The industry statistics (employment, payroll, value of shipments and receipts, cost of supplies, etc.) are reported for each establishment as a whole. Industry aggregates of these data measure not only the primary activities of the establishments, which determine their industry classification, but also all secondary activities performed by the same establishments. This fact should be taken into account in comparing industry statistics (tables 1, 2, 4a, and 4b) with product statistics (table 3) showing shipments by all industries of the



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primary products of the specified industry. (See appendix for a discussion of the difference between value of shipments and receipts for the industry and value of product shipments.) All dollar figures shown in this report are in current dollars for the years specified and have not been adjusted for changes in price levels. Therefore, when making comparisons to prior years, users should take into consideration the inflation that has occurred.

The methods of data collection which include the use of administrative-record data are discussed in detail in the appendix. Small single-unit companies (the cutoff varied by industry) were not mailed a questionnaire. For these establishments (and a small number of larger establishments whose reports were not received at the time of tabulation), some employment, payroll, and receipt data were obtained from administrative records of other government agencies. These data were then used in conjunction with industry averages to estimate the statistics for the administrative-record and nonresponse establishments.

Single-unit establishments in the crude petroleum and natural gas industry with less than 4 employees were not mailed questionnaires. These establishments accounted for 1 percent of the total value of shipments and receipts.

The following abbreviations and symbols are used in the tables in this publication:

- Represents zero.
- (D) Withheld to avoid disclosing data for individual companies.
- (NA) Not available.
- (S) Withheld because estimate did not meet publication standards on the basis of either the response rate or a consistency review.
- (X) Not applicable.
- (Z) Less than half the unit shown.
- n.e.c. Not elsewhere classified.
- n.s.k. Not specified by kind.
- r Revised.
- SIC Standard Industrial Classification.

Other abbreviations, such as lb, gal, yd, and bbl, are used in the customary sense. Where the term "tons" only is used, it refers to short tons of 2,000 pounds; where the figures are expressed in tons of 2,240 pounds, the unit of measure is specified as "long tons" or "l. tons."

¹Standard Industrial Classification Manual: 1972. For sale by Superintendent of Documents, U.S. Government Printing Office, Washington, D.C. 20402. Stock No. 041-001-00066-6. 1977 Supplement. Stock No. 003-005-00176-0.

Table 1. Historical Industry Statistics: 1982 and Earlier Years

[For meaning of abbreviations and symbols, see introductory text. For explanation of terms, see appendix]

Year	Companies (number)	Establishments during year		All employees		Production, development, and exploration workers			Value added by mining (million dollars)	Cost of supplies used, purchased machinery installed, etc. (million dollars)	Value of shipments and receipts (million dollars)	Production of primary products		Capital expendi- tures (million dollars)	
		Total (number)	With 20 employees or more (number)	Number (1,000)	Payroll (million dollars)	Number (1,000)	Hours (millions)	Wages (million dollars)				Crude pe- troleum and lease con- densate ¹ (million barrels)	Natural gas (billion cu. ft)		
	INDUSTRY 1311, CRUDE PETROLEUM AND NATURAL GAS														
1982 ³	8 694	427 518	41 963	261.4	7 978.6	103.8	217.8	2 771.6	127 210.8	44 167.7	137 431.3	2 830.8	15 584.8	33 947.2	
1977 ³	6 217	8 573	981	139.7	2 738.2	59.9	118.0	1 025.0	38 327.1	13 418.7	40 829.8	2 826.4	18 229.6	10 916.0	
1972 ³	5 631	7 609	820	116.6	1 375.2	51.9	101.8	498.9	14 421.0	4 221.4	15 688.1	3 235.6	20 968.5	2 954.3	
1967 ³	5 482	8 796	1 034	126.4	1 049.1	66.2	130.0	440.3	10 965.0	3 308.3	11 731.7	3 043.7	17 126.1	2 541.6	
1963	10 594	14 378	954	145.2	1 016.4	83.4	166.3	494.9	9 016.4	3 087.3	9 893.8	2 689.0	15 896.0	2 209.9	
1958 ⁵	9 852	12 010	1 093	180.1	1 043.1	102.5	201.0	497.9	7 339.9	2 993.6	8 385.9	2 353.0	12 085.0	1 947.6	

Note: For data prior to 1958, see 1963 Census of Mineral Industries, volume I, table 1 of industry chapter.

¹Represents shipments of crude petroleum and lease condensate plus crude petroleum produced and used in lease operations for power and heat or other purposes.

²Beginning with 1982, establishments with oil shale, oil sand, and coal gasification operations are included in the census. Data for these establishments are shown separately on table 2.

³Beginning with 1967, data for single-unit establishments without paid employees were excluded from the census.

⁴Data for 1982 are not comparable to prior years. In 1982, companies primarily operating oil and gas field properties were requested to submit one report for oil and gas field operations in each State or adjacent offshore area. For such operations, selected statistics were requested by county. Establishment figures for 1982 represent sum of number of counties specified in each report.

⁵Excludes data for Alaska.

Table 2. Industry Statistics for Selected States and Type of Operation: 1982 and 1977

[For meaning of abbreviations and symbols, see introductory text. For explanation of terms, see appendix]

Industry, geographic area, and type of operation	1982												1977	
	E ¹	Establishments during year		All employees		Production, development, and exploration workers			Value added by mining (million dollars)	Cost of supplies used, purchased machinery installed, etc. (million dollars)	Value of shipments and receipts (million dollars)	Capital expenditures (million dollars)	All employees ² (1,000)	Value added by mining (million dollars)
		Total (number)	With 20 employees or more (number)	Number ² (1,000)	Payroll (million dollars)	Number (1,000)	Hours (millions)	Wages (million dollars)						
INDUSTRY 1311, CRUDE PETROLEUM AND NATURAL GAS														
Geographic Area														
United States -----	E1	27 518	1 963	261.4	7 978.6	103.8	217.8	2 771.6	127 210.8	44 167.7	137 431.3	33 947.2	139.7	38 327.1
Alabama -----	-	116	6	.4	11.3	.3	.6	7.1	857.1	269.0	881.7	244.4	.2	207.2
Alaska -----	-	61	16	FF	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	2.3	1 058.8
Arizona -----	-	42	1	.1	2.6	(S)	(S)	(S)	(S)	(S)	(S)	(S)	(D)	(D)
Arkansas -----	E1	365	9	1.2	25.7	.8	1.5	15.5	794.3	220.2	873.9	140.7	.9	237.0
California -----	-	663	117	19.4	658.7	7.7	16.0	222.0	9 746.9	3 797.3	10 501.5	3 042.8	13.2	2 662.0
Colorado -----	E5	913	144	16.3	562.4	4.3	9.1	128.6	2 051.5	1 593.9	2 773.0	872.3	4.6	522.5
Connecticut -----	-	8	1	AA	(D)	-	-	-	-	-	-	-	BB	(D)
Florida -----	-	76	4	BB	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	BB	(D)
Illinois -----	E4	662	28	3.4	70.1	2.5	4.7	46.4	675.8	334.7	912.6	97.8	2.2	211.2
Indiana -----	E4	199	3	.6	10.2	.5	.9	7.1	131.4	60.7	174.5	17.6	.3	50.8
Kansas -----	E2	2 266	71	8.0	213.5	4.4	8.6	88.4	2 186.4	733.3	2 643.5	276.3	5.3	818.7
Kentucky -----	E4	319	25	2.4	45.2	1.3	2.5	22.7	311.3	125.0	391.7	44.6	1.3	102.2
Louisiana -----	-	2 000	222	31.8	1 008.3	15.2	33.5	451.2	26 230.0	8 435.4	26 678.3	7 987.1	21.4	9 782.8
Michigan -----	E1	294	26	2.0	55.0	1.0	2.2	27.5	1 309.5	266.1	1 407.1	168.5	1.1	466.4
Minnesota -----	-	17	2	.2	6.7	-	-	-	-	-	-	-	(D)	(D)
Mississippi -----	E2	509	28	2.0	56.1	1.0	2.2	27.0	1 397.3	587.0	1 642.8	341.4	1.0	331.1
Montana -----	E1	451	19	1.4	39.8	.9	1.7	24.5	1 060.4	390.7	1 178.1	273.1	.6	271.1
Nebraska -----	E3	164	3	.4	9.4	.2	.5	4.8	151.6	63.7	188.7	26.6	.3	28.2
Nevada -----	E8	34	2	.2	4.2	(S)	(S)	(S)	(S)	(S)	(S)	(S)	(D)	(D)
New Jersey -----	-	16	2	CC	(D)	-	-	-	-	-	-	-	.3	3.1
New Mexico -----	-	647	45	4.4	115.9	2.9	5.9	78.3	4 917.6	1 153.4	5 238.8	832.3	2.5	1 559.9
New York -----	E7	171	10	1.1	26.7	(S)	(S)	(S)	(S)	(S)	(S)	(S)	.8	26.7
North Dakota -----	-	374	12	1.3	40.8	.9	2.0	25.7	1 419.0	994.2	1 517.2	896.0	.4	204.5
Ohio -----	E3	710	35	4.0	86.3	2.5	5.0	44.0	708.0	332.1	797.2	242.9	1.5	161.1
Oklahoma -----	E3	4 160	264	39.0	1 188.5	11.7	23.6	287.2	8 751.1	4 947.1	10 515.8	3 182.4	16.3	2 311.7
Pennsylvania -----	E3	380	22	3.5	89.2	1.2	2.3	23.2	340.3	157.7	390.1	107.9	1.4	81.8
Tennessee -----	E8	71	5	.4	7.0	(S)	(S)	(S)	(S)	(S)	(S)	(S)	(NA)	(NA)
Texas -----	E1	9 884	715	101.1	3 058.4	34.8	74.9	954.7	42 433.6	13 157.8	46 395.3	9 246.0	54.3	15 169.3
Utah -----	E1	222	25	1.6	43.8	.9	1.9	24.2	691.2	679.0	1 030.2	340.0	1.9	304.2
Virginia -----	E2	38	3	.2	3.7	.1	.2	1.4	33.8	19.0	31.6	21.2	(D)	(D)
West Virginia -----	E3	740	30	2.7	52.9	1.9	3.8	34.6	471.9	256.2	564.8	163.3	1.4	109.6
Wyoming -----	-	733	51	4.9	149.7	3.0	6.4	91.4	3 719.0	1 845.5	4 295.7	1 268.8	2.8	1 083.6
Northern Gulf Of Mexico -----	-	13	7	1.1	36.6	.7	1.7	22.9	1 988.2	594.6	1 045.3	637.5	(Z)	-2.2
Pacific -----	-	4	2	BB	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(NA)	(NA)
Type of Operation														
Producing establishments -----	E1	26 638	1 922	256.4	7 818.1	101.8	213.5	2 720.8	126 924.8	43 123.7	137 431.3	32 617.1	138.0	38 266.1
Oil shale, oil sand, and coal gasification -----	-	*10	4	.4	15.8	.3	.6	11.2	.9	(D)	2.1	(D)	-	-
Nonproducing establishments ----	-	880	41	5.0	160.6	1.9	4.3	50.8	286.1	1 044.0	-	1 330.1	1.7	61.0

Table 2. Industry Statistics for Selected States and Type of Operation: 1982 and 1977—Con.

¹Some payroll and sales data for small single-unit companies with up to 20 employees (cutoff varied by industry) were obtained from administrative records of other government agencies rather than from census report forms. These data were then used in conjunction with industry averages to estimate statistics for these small establishments. This technique was also used for a small number of other establishments whose reports were not received at time data were tabulated. The following symbols are shown where estimated data based on administrative-record data account for 10 percent or more of figures shown: E1—10 to 19 percent; E2—20 to 29 percent; E3—30 to 39 percent; E4—40 to 49 percent; E5—50 to 59 percent; E6—60 to 69 percent; E7—70 to 79 percent; E8—80 to 89 percent; E9—90 percent or more.

²Data lines with less than 100 employees are not shown. Some statistics are withheld to avoid disclosing data for individual companies. If employment is 100 or more, number of establishments is shown and employment size range is indicated by one of the following symbols: AA—100 to 249 employees; BB—250 to 499 employees; CC—500 to 999 employees; EE—1,000 to 2,499 employees; FF—2,500 employees or more.

³Includes 8 establishments with oil shale operations, 1 with an oil sand operation, and 1 with a coal gasification operation.

Table 3. Products or Services for Selected States: 1982 and 1977

[Includes quantity and value of products of this industry produced by (1) establishments classified in this industry (primary) and (2) establishments classified in other industries (secondary). Transfers of products of this industry from one establishment of a company to another establishment of the same company (interplant transfers) are also included. For meaning of abbreviations and symbols, see introductory text. For explanation of terms, see appendix]

Product or service code	Geographic area and product or service	1982 shipments or receipts for services		1977 shipments or receipts for services	
		Quantity	Value (million dollars)	Quantity	Value (million dollars)
	CRUDE PETROLEUM AND NATURAL GAS				
	United States				
1311- --	Crude petroleum and natural gas -----	(X)	137 016.0	(X)	40 763.3
13111 --	Crude petroleum, including lease condensate (volumes corrected to 60° F.):				
13111 00	Shipped----- mil. bbl..	2 804.7	77 970.3	2 836.2	23 451.6
13111 04	From stripper well leases ----- do..	249.7	(X)	250.7	(X)
13111 06	Used in lease operations for power, heat, or other purposes, including losses ----- do..	32.1	(X)	18.3	(X)
13111 07	Lease condensate produced (volumes corrected to 60° F.) ----- do..	166.3	(X)	262.1	(X)
13115 --	Natural gas (volumes adjusted to pressure base of 14.73 pounds absolute at 60° F.):				
13115 00	Shipped to consumers----- bil. cu. ft..	15 639.1	39 516.9	18 278.4	15 418.0
13115 34	Used in lease operations for power, heat, or gas lift ----- do..	838.1	(X)	952.6	(X)
13115 36	Returned to underground formations for repressuring, pressure maintenance, and cycling ----- do..	708.9	(X)	664.4	(X)
13115 38	Increase in underground storage ----- do..	10.6	(X)	24.7	(X)
13115 40	Decrease in underground storage ----- do..		(X)	24.7	(X)
13115 42	Vented to air, burned in flares, and other losses ----- do..	171.3	(X)	169.1	(X)
13115 44	Total disposition ----- do..	17 368.0	(X)	20 089.2	(X)
13116 --	Oil shale products -----	(X)	2.1	(X)	-
13116 01	Synthetic petroleum liquids, except methanol ----- mil. bbl..	.1	2.1	-	-
13110 00	Crude petroleum and natural gas, n.s.k. ¹ -----	(X)	19 526.8	(X)	1 893.7
	Alabama				
1311- --	Crude petroleum and natural gas -----	(X)	879.5	(X)	215.3
13111 --	Crude petroleum, including lease condensate (volumes corrected to 60° F.):				
13111 00	Shipped----- mil. bbl..	18.1	580.6	15.1	166.1
13115 --	Natural gas (volumes adjusted to pressure base of 14.73 pounds absolute at 60° F.):				
13115 00	Shipped to consumers----- bil. cu. ft..	80.0	285.6	27.8	44.8
13110 00	Crude petroleum and natural gas, n.s.k. ¹ -----	(X)	13.3	(X)	4.5
	Arkansas				
1311- --	Crude petroleum and natural gas -----	(X)	871.5	(X)	247.7
13111 --	Crude petroleum, including lease condensate (volumes corrected to 60° F.):				
13111 00	Shipped----- mil. bbl..	12.4	377.9	17.8	167.8
13115 --	Natural gas (volumes adjusted to pressure base of 14.73 pounds absolute at 60° F.):				
13115 00	Shipped to consumers----- bil. cu. ft..	112.5	340.4	87.6	63.9
13110 00	Crude petroleum and natural gas, n.s.k. ¹ -----	(X)	153.3	(X)	16.0
	California				
1311- --	Crude petroleum and natural gas -----	(X)	10 483.5	(X)	3 068.9
13111 --	Crude petroleum, including lease condensate (volumes corrected to 60° F.):				
13111 00	Shipped----- mil. bbl..	357.6	8 695.1	332.2	2 596.9
13115 --	Natural gas (volumes adjusted to pressure base of 14.73 pounds absolute at 60° F.):				
13115 00	Shipped to consumers----- bil. cu. ft..	343.4	1 087.0	332.6	356.0
13110 00	Crude petroleum and natural gas, n.s.k. ¹ -----	(X)	701.4	(X)	116.0
	Colorado				
1311- --	Crude petroleum and natural gas -----	(X)	2 764.3	(X)	580.7
13111 --	Crude petroleum, including lease condensate (volumes corrected to 60° F.):				
13111 00	Shipped----- mil. bbl..	23.2	708.4	36.7	351.6
13115 --	Natural gas (volumes adjusted to pressure base of 14.73 pounds absolute at 60° F.):				
13115 00	Shipped to consumers----- bil. cu. ft..	158.9	444.0	174.1	155.2
13116 --	Oil shale products -----	(X)	(D)	(X)	-
13116 01	Synthetic petroleum liquids, except methanol ----- mil. bbl..	(D)	(D)	-	-
13110 00	Crude petroleum and natural gas, n.s.k. ¹ -----	(X)	(D)	(X)	73.9
	Kansas				
1311- --	Crude petroleum and natural gas -----	(X)	2 606.6	(X)	924.1
13111 --	Crude petroleum, including lease condensate (volumes corrected to 60° F.):				
13111 00	Shipped----- mil. bbl..	40.1	1 207.8	40.3	459.9
13115 --	Natural gas (volumes adjusted to pressure base of 14.73 pounds absolute at 60° F.):				
13115 00	Shipped to consumers----- bil. cu. ft..	414.4	601.7	749.3	360.3
13110 00	Crude petroleum and natural gas, n.s.k. ¹ -----	(X)	797.1	(X)	103.8

See footnotes at end of table.

Table 3. Products or Services for Selected States: 1982 and 1977—Con.

[Includes quantity and value of products of this industry produced by (1) establishments classified in this industry (primary) and (2) establishments classified in other industries (secondary). Transfers of products of this industry from one establishment of a company to another establishment of the same company (interplant transfers) are also included. For meaning of abbreviations and symbols, see introductory text. For explanation of terms, see appendix]

Product or service code	Geographic area and product or service	1982 shipments or receipts for services		1977 shipments or receipts for services	
		Quantity	Value (million dollars)	Quantity	Value (million dollars)
	CRUDE PETROLEUM AND NATURAL GAS—Con.				
	Louisiana				
1311—	Crude petroleum and natural gas	(X)	26 628.7	(X)	9 856.0
13111 —	Crude petroleum, including lease condensate (volumes corrected to 60° F.):				
13111 00	Shipped..... mil. bbl.....	388.2	12 584.5	552.4	4 635.1
13115 —	Natural gas (volumes adjusted to pressure base of 14.73 pounds absolute at 60° F.):				
13115 00	Shipped to consumers..... bil. cu. ft.....	5 030.2	12 724.7	6 601.2	5 111.0
13110 00	Crude petroleum and natural gas, n.s.k. ¹	(X)	1319.5	(X)	109.8
	Michigan				
1311—	Crude petroleum and natural gas	(X)	1 397.7	(X)	500.6
13111 —	Crude petroleum, including lease condensate (volumes corrected to 60° F.):				
13111 00	Shipped..... mil. bbl.....	26.1	818.4	30.2	324.1
13115 —	Natural gas (volumes adjusted to pressure base of 14.73 pounds absolute at 60° F.):				
13115 00	Shipped to consumers..... bil. cu. ft.....	126.2	399.6	127.5	145.8
13110 00	Crude petroleum and natural gas, n.s.k. ¹	(X)	179.7	(X)	30.8
	Mississippi				
1311—	Crude petroleum and natural gas	(X)	1 641.0	(X)	367.1
13111 —	Crude petroleum, including lease condensate (volumes corrected to 60° F.):				
13111 00	Shipped..... mil. bbl.....	28.0	806.1	38.6	269.7
13115 —	Natural gas (volumes adjusted to pressure base of 14.73 pounds absolute at 60° F.):				
13115 00	Shipped to consumers..... bil. cu. ft.....	126.0	413.6	75.5	69.4
13110 00	Crude petroleum and natural gas, n.s.k. ¹	(X)	421.2	(X)	28.0
	Montana				
1311—	Crude petroleum and natural gas	(X)	1 160.4	(X)	292.3
13111 —	Crude petroleum, including lease condensate (volumes corrected to 60° F.):				
13111 00	Shipped..... mil. bbl.....	27.4	864.9	29.8	244.0
13115 —	Natural gas (volumes adjusted to pressure base of 14.73 pounds absolute at 60° F.):				
13115 00	Shipped to consumers..... bil. cu. ft.....	35.0	128.7	20.0	10.6
13110 00	Crude petroleum and natural gas, n.s.k. ¹	(X)	166.8	(X)	37.7
	New Mexico				
1311—	Crude petroleum and natural gas	(X)	5 213.8	(X)	1 648.9
13111 —	Crude petroleum, including lease condensate (volumes corrected to 60° F.):				
13111 00	Shipped..... mil. bbl.....	75.7	2 382.1	83.4	752.3
13115 —	Natural gas (volumes adjusted to pressure base of 14.73 pounds absolute at 60° F.):				
13115 00	Shipped to consumers..... bil. cu. ft.....	933.5	2 508.3	1 166.3	875.6
13110 00	Crude petroleum and natural gas, n.s.k. ¹	(X)	323.5	(X)	21.0
	North Dakota				
1311—	Crude petroleum and natural gas	(X)	1 511.0	(X)	197.4
13111 —	Crude petroleum, including lease condensate (volumes corrected to 60° F.):				
13111 00	Shipped..... mil. bbl.....	39.7	1 251.9	21.1	180.3
13115 —	Natural gas (volumes adjusted to pressure base of 14.73 pounds absolute at 60° F.):				
13115 00	Shipped to consumers..... bil. cu. ft.....	40.7	93.9	23.1	15.2
13110 00	Crude petroleum and natural gas, n.s.k. ¹	(X)	165.1	(X)	1.8
	Oklahoma				
1311—	Crude petroleum and natural gas	(X)	10 485.3	(X)	2 581.1
13111 —	Crude petroleum, including lease condensate (volumes corrected to 60° F.):				
13111 00	Shipped..... mil. bbl.....	114.8	3 586.3	126.9	1 200.0
13115 —	Natural gas (volumes adjusted to pressure base of 14.73 pounds absolute at 60° F.):				
13115 00	Shipped to consumers..... bil. cu. ft.....	1 332.4	3 409.9	1 453.4	1 133.3
13110 00	Crude petroleum and natural gas, n.s.k. ¹	(X)	3 489.1	(X)	247.9
	Texas				
1311—	Crude petroleum and natural gas	(X)	46 214.9	(X)	16 006.6
13111 —	Crude petroleum, including lease condensate (volumes corrected to 60° F.):				
13111 00	Shipped..... mil. bbl.....	793.4	24 739.6	1 063.3	8 742.4
13115 —	Natural gas (volumes adjusted to pressure base of 14.73 pounds absolute at 60° F.):				
13115 00	Shipped to consumers..... bil. cu. ft.....	5 529.7	13 801.4	6 643.8	6 501.5
13110 00	Crude petroleum and natural gas, n.s.k. ¹	(X)	7 673.9	(X)	762.7
	Utah				
1311—	Crude petroleum and natural gas	(X)	1 027.0	(X)	329.3
13111 —	Crude petroleum, including lease condensate (volumes corrected to 60° F.):				
13111 00	Shipped..... mil. bbl.....	23.0	672.2	30.0	267.0
13115 —	Natural gas (volumes adjusted to pressure base of 14.73 pounds absolute at 60° F.):				
13115 00	Shipped to consumers..... bil. cu. ft.....	62.7	194.5	47.4	49.2
13116 —	Oil shale products	(X)	(D)	(X)	-
13116 01	Synthetic petroleum liquids, except methanol	(D)	(D)	-	-
13110 00	Crude petroleum and natural gas, n.s.k. ¹	(X)	(D)	(X)	13.2

See footnotes at end of table.

Table 3. Products or Services for Selected States: 1982 and 1977—Con.

[Includes quantity and value of products of this industry produced by (1) establishments classified in this industry (primary) and (2) establishments classified in other industries (secondary). Transfers of products of this industry from one establishment of a company to another establishment of the same company (interplant transfers) are also included. For meaning of abbreviations and symbols, see introductory text. For explanation of terms, see appendix]

Product or service code	Geographic area and product or service	1982 shipments or receipts for services		1977 shipments or receipts for services	
		Quantity	Value (million dollars)	Quantity	Value (million dollars)
	CRUDE PETROLEUM AND NATURAL GAS—Con.				
	West Virginia				
1311—	Crude petroleum and natural gas	(X)	558.8	(X)	(NA)
13111 —	Crude petroleum, including lease condensate (volumes corrected to 60° F.):				
13111 00	Shipped..... mil. bbl..	2.0	59.1	(NA)	(NA)
13115 —	Natural gas (volumes adjusted to pressure base of 14.73 pounds absolute at 60° F.):				
13115 00	Shipped to consumers..... bil. cu. ft..	89.8	287.1	(NA)	(NA)
13110 00	Crude petroleum and natural gas, n.s.k. ¹	(X)	212.7	(X)	(NA)
	Wyoming				
1311—	Crude petroleum and natural gas	(X)	4 290.1	(X)	1 220.1
13111 —	Crude petroleum, including lease condensate (volumes corrected to 60° F.):				
13111 00	Shipped..... mil. bbl..	103.0	2 971.5	125.9	984.6
13115 —	Natural gas (volumes adjusted to pressure base of 14.73 pounds absolute at 60° F.):				
13115 00	Shipped to consumers..... bil. cu. ft..	325.6	1 039.9	306.4	207.6
13110 00	Crude petroleum and natural gas, n.s.k. ¹	(X)	278.7	(X)	27.9
	Northern Gulf Of Mexico				
1311—	Crude petroleum and natural gas	(X)	1 945.3	(X)	(NA)
13111 —	Crude petroleum, including lease condensate (volumes corrected to 60° F.):				
13111 00	Shipped..... mil. bbl..	(D)	(D)	(NA)	(NA)
13115 —	Natural gas (volumes adjusted to pressure base of 14.73 pounds absolute at 60° F.):				
13115 00	Shipped to consumers..... bil. cu. ft..	(D)	(D)	(NA)	(NA)
13110 00	Crude petroleum and natural gas, n.s.k. ¹	(X)	-	(X)	(NA)

¹Includes value for establishments that did not report detailed data and estimates for small companies (estimates were made from administrative-record data rather than collected from respondents).

Table 4a. Selected Supplies, Minerals Received for Preparation, and Purchased Machinery Installed: 1982 and 1977

[Includes quantity and cost of materials consumed or put into production by establishments classified only in this industry. For meaning of abbreviations and symbols, see introductory text. For explanation of terms, see appendix]

Supply code	Industry and supply consumed	1982		1977	
		Quantity	Delivered cost (million dollars)	Quantity	Delivered cost (million dollars)
	INDUSTRY 1311, CRUDE PETROLEUM AND NATURAL GAS				
	Selected supplies used, minerals received for preparation, and purchased machinery installed	(X)	21 190.3	(X)	6 252.9
	Minerals or ores for preparation:				
131105	Gas purchased for gas lift and repressuring bil. cu. ft.	31.9	46.6	26.1	21.4
131153	Oil shale mined and prepared at same establishment 1,000 s. tons..	(D)	(X)	(NA)	(X)
353020	Purchased machinery installed, including mobile loading and transportation equipment	(X)	6 990.0	}	(X) 1 992.0
353030	Parts and attachments (except those listed elsewhere) for construction, mining, and conveying equipment; and for preparation machinery	(X)	755.8		
	Supplies used:				
280111	Industrial chemicals including acidizing materials (except drilling fluids)	(X)	592.3	(X)	(¹)
289910	Drilling fluids (drilling mud and drilling mud materials; mud thinners, thickeners, and purifiers)	(X)	1 455.8	(X)	(¹)
290000	Lubricating oils and greases, including hydraulic oils	(X)	116.3	(X)	(¹)
324100	Cement..... mil. s. tons.	(S)	659.7	(NA)	(¹)
331201	Steel mill shapes and forms (such as plates, sheets, roof bolts, bars, rails, wheels, pipe, tubing, wire products, and structural shapes)	(X)	4 440.1	(X)	1 804.6
349020	Valves and pipe fittings	(X)	543.6	(X)	(¹)
353310	Drill bits and reamers	(X)	463.3	(X)	(¹)
494100	Water purchased	(X)	159.3	(X)	(¹)
970099	All other supplies ²	(X)	1 569.6	(X)	2 192.1
974000	Undistributed—minerals, purchased machinery, parts, attachments, and supplies used ³	(X)	3 397.9	(X)	242.7

¹Cost for this supply is shown separately in 1982. In 1977, this category was included in all other supplies.

²A number of supplies included in the all other supplies category in 1977 are now shown separately.

³Represents cost for establishments that did not report detailed data, including establishments that were not mailed a form.

Table 4b. Fuels Consumed by Type, 1982 and 1977, and End-of-Year Fuel Stocks, 1982

[For meaning of abbreviations and symbols, see introductory text. For explanation of terms, see appendix]

Fuel code	Industry and fuel consumed	1982 consumption		1982 end-of-year stocks ¹ (quantity)	1977 consumption	
		Quantity	Delivered cost (million dollars)		Quantity	Delivered cost (million dollars)
	INDUSTRY 1311, CRUDE PETROLEUM AND NATURAL GAS					
	Fuels used	(X)	1 215.3	(X)	(X)	275.9
	Fuel oil:					
291141	Distillate (light) grade numbers 1, 2, 4, and light diesel fuel	7 131.1	313.6	(S)	6	826.9
291151	Residual (heavy) grade numbers 5 and 6 and heavy diesel fuel	4 792.2	136.7	(S)		
131159	Gas—natural, manufactured, and mixed	147.6	362.7	(X)		
291111	Gasoline	100.5	117.4	(S)		
960018	Other fuels—liquefied petroleum gas, coke, wood, and other	(X)	124.5	(X)		
977000	Undistributed fuels ²	(X)	160.4	(X)		
131106	Crude petroleum produced and used at same establishment	(S)	(X)	(X)		
131108	Natural gas produced and used at same establishment	(S)	(X)	(X)		

¹Fuel stocks were collected for the first time in 1982.

²Represents cost for establishments that did not report detailed data, including establishments that were not mailed a form.

APPENDIX

Scope and Coverage and Explanation of Terms

SCOPE AND COVERAGE

Establishment Basis of Reporting

The census of mineral industries covers each mining establishment of firms with one paid employee or more operating in the United States. A firm operating more than one establishment is required to file a separate report for each location. Companies engaged in distinctly different lines of activity at one location are asked to submit separate reports if records permit such a separation and the activities are of significant size.

Statistics for employment and payroll for individual industries and industry groups also include employment and payroll figures for administrative offices, warehouses, storage facilities, and other auxiliary establishments servicing mining establishments. Respondents were asked to file separate reports for any separately operated auxiliary establishments. Classification of employment and payroll data at such auxiliary establishments was based on the mining establishments served.

For oil and gas field operations and for contract services, the basis for reporting was different from the "establishment" basis used for other types of mining. Firms operating oil and gas wells, drilling wells, or exploring for oil and gas for their own account, were required to submit a separate report for each State or offshore area adjacent to a State in which it conducted such activities and to include employment, production, and capital expenditures data at the county level. Firms which supplied contract services for oil and gas field operations or for mining establishments were required to submit one report covering all such activities in the United States and to include information on receipts for services by State and county. These consolidated reports were then allocated to county establishments based on the data reported at the county level.

Use of Administrative Records

From a mailout universe of 36,000 mining establishments, approximately 11,000 small single establishment companies were not mailed a questionnaire. For these establishments, some employment, payroll, and receipts data were obtained from the administrative records of other agencies. Selection of the small establishment nonmail cases was done on an industry-by-industry basis, and a variable cutoff was used to determine those establishments for which administrative records were to be used in place of a census report. This information was then used in conjunction with industry averages to estimate the statistics for administrative-record and nonresponse establishments. The value of shipments and receipts and cost of supplies were not distributed among specific products and supplies for these establishments, but were included in the product and supply "not specified by kind" categories. Overall, establishments for which administrative-record data were used accounted for less than 3 percent of total value of shipments.

Value of Shipments and Receipts for the Industry Compared to Value of Product Shipments

Figures for value of shipments and receipts represent the total shipments and receipts for all establishments classified

in this industry and include products primary to the industry, products classified as primary in other industries but secondary to this industry, and miscellaneous receipts (repair work, sale of scrap, research and development, installation receipts, and resales). Value of product shipments represents products classified as primary to this industry that were shipped by all mining and manufacturing establishments, regardless of their industry classification.

EXPLANATION OF TERMS

All employees—This item includes all full-time and part-time employees on the payrolls of operating mineral establishments for any part of the pay period including the 12th of the months specified on the report form. Included are all persons on paid sick leave, paid holidays, and paid vacation during these pay periods. Officers of the corporations are included as employees; proprietors and partners of unincorporated firms are excluded. The "all employee" number is the average number of production workers plus the number of other employees in mid-March. The number of production workers is the average of those for the midmonth payroll periods of March, May, August, and November.

Payroll—This item includes all forms of compensation; such as salaries, wages, commissions, dismissal pay, bonuses, vacation and sick leave pay, and compensation in kind, prior to such deductions as employees' Social Security contributions, withholding taxes, group insurance, union dues, and savings bonds. The total includes salaries of officers of these establishments, if it is a corporation; it excludes payments to the proprietor or partners, if it is an unincorporated concern. Respondents were told that in reporting they could follow the definition of payroll used for calculating the Federal withholding tax.

Production-, development-, and exploration-worker hours—This item represents all hours that production, development, and exploration workers worked both on active days during which there was production or development work and on inactive days when only guards, inspectors, repairpersons, and other maintenance persons were on duty. It includes all hours worked or paid for at the mining operations, except hours for paid vacations, holidays, or sick leave, when the employee was not at the establishment. Included are actual overtime hours, not straight-time equivalent hours. Hours of working proprietors or partners are excluded.

Cost of supplies used, purchased machinery installed, etc.—This cost includes supplies, minerals received for preparation, and purchased machinery installed, fuels and electric energy used, contract work done by others, and cost of products bought and resold without further processing. It includes charges to both the current and capital accounts. It also includes the cost of items used during 1982, whether they were purchased, withdrawn from inventories, or received from other establishments of the company. Supplies and equipment used in mine development, plant expansion, and capitalized repairs, which are chargeable to fixed assets accounts, were included, as were supplies furnished without charge to contractors for

use at the mining operation and supplies sold to employees for use at the establishment. No data on such costs as advertising, insurance, telephone, and research and consulting services of other establishments; or on overhead costs, such as depreciation charges, rent, interest, and royalties were included in this item. For selected supplies and fuels and for electric energy, both quantity and cost data were requested. The cost data refer to direct charges actually paid or payable (after discounts) for items used during the year. Freight charges and other direct charges, incurred by the establishment in acquiring the item, are included. Where the company's records did not show actual amounts used, they were asked to approximate use by adding purchases (or receipts) during the year to beginning inventory and subtracting ending inventory.

Specific supplies used and minerals prepared—In addition to the total cost of supplies used and purchased machinery installed, etc., which every establishment was required to report, information was also collected on the consumption of major supplies used in mining. These inquiries were restricted to supplies which were important parts of the cost of production, exploration, and development of a particular industry and for which cost information was available from the firms' records.

On report forms for almost all mineral industries, except the contract services industries, a uniform inquiry was included on minerals prepared at the reported establishments. Figures were obtained on minerals prepared from three sources: (1) crude minerals mined at the establishment (quantity); (2) crude minerals received from others (quantity and cost); and (3) crude minerals received for preparation on a custom or toll basis (quantity and estimated value).

Establishments consuming less than a specified amount (usually \$25,000) were not requested to report separately the cost of a supply. Also, the cost of supplies for small establishments for which administrative records were used was estimated as "not specified by kind."

Specific fuels used and stocks on hand—This item includes the quantity and cost of fuels used in mining. For most industries, every establishment was required to report separate quantity and cost figures for purchased coal, distillate fuel oil, residual fuel oil, gas, and gasoline, and a cost figure for "other fuels," as shown in table 4b. The cost of fuels for small establishments for which administrative records were used were imputed as "not specified by kind."

In addition, figures for stocks of purchased fuels on hand at the end of the year were reported for the first time in 1982. Every establishment was required to report the total quantity of unexpended fuel it had on hand, including emergency reserves, at the end of the year. Excluded are fuels to be used as feedstocks or raw materials.

Value added by mining—This measure of mining activity is derived by subtracting the total cost of supplies used, purchased machinery installed, etc., from the sum of the value of shipments and receipts (mining products plus receipts for services rendered) and total capital expenditures.

This statistic avoids the duplication in value of shipments and receipts, which results from the use of products of some establishments as supplies, energy sources, or materials by others. Moreover, it provides a measure of value added, not only in mineral production, but also in the development of mineral properties. For these reasons, it is considered to be the best value measure for comparing the relative economic importance of mining among industries and geographic areas.

Value of shipments and receipts—This item includes the values, f.o.b. mine, well, or plant (exclusive of freight and taxes), of all primary and secondary products shipped, as well as all miscellaneous receipts such as receipts for contract work performed for others, installation and repair, sale of scrap, and sale of products bought and resold without further processing. Included are all items produced by the establishments and sold, transferred to other plants of the same company, or shipped on consignment.

In the case of multiunit companies, the firm was requested to report the value of products transferred to other establishments of the same company at full economic or commercial value; i.e., including not only the direct costs of production, but also a reasonable proportion of "all other costs" (including company overhead) and profit.

For industry and industry group totals, some duplication is introduced by the inclusion of materials transferred from one establishment to another for mineral preparation. Wherever value of shipments and receipts is shown without further specification, it represents gross shipments.

Shipments of individual products—In the 1982 Census of Mineral Industries, information was collected on the output of about 200 individual mineral product items. In general, the figures of the 1982 and 1977 mineral censuses were confined to separate totals for each crude and each prepared mineral. Where significant, separate shipments figures were also obtained for crude minerals going to preparation plants and those going to consumers.

Figures were collected on both quantity and value of shipments. Shipments included commercial shipments and transfers of products to other operations of the same company. For products which are used to a significant extent within the same establishment for power or heat, and for minerals mined and prepared in the same establishment, total production or separate data on production for such uses were collected. Typically, production was also collected for products for which there are usually significant differences between the total production and total shipments as a result of stock changes.

For service industries, the amount received or due for services performed during 1982 was collected as a measure of output. For mine operators who also perform services, the amount received for such services was added to the total value of products shipped to determine total value of shipments and receipts for each establishment.

Capital expenditures—This item covers expenditures made during the year for development and exploration of mineral properties, for construction, and for purchased machinery chargeable to fixed assets accounts of the mineral establishment. They are the type for which depreciation, depletion, or Office of Minerals Exploration accounts are ordinarily maintained. Capital expenditures during 1982 were to be determined as "additions completed during the year plus construction in progress at the end of the year minus construction in progress at the beginning of the year." Reported capital expenditures were to include work done by contract, as well as by the mine forces. Expenditures for machinery and equipment were to include those made for replacement purposes, as well as those for additions to capacity. Excluded from these expenditures were costs of maintenance and repairs charged as current operating expense and expenditures for land and mineral rights.

The image shows the front cover of a book titled "STATE AND METROPOLITAN AREA DATA BOOK 1982". The title is printed in a bold, sans-serif font, with "1982" in a larger size. Below the title is a rectangular frame containing four black and white photographs arranged in a 2x2 grid. The top-left photo shows a large, classical-style building with columns. The top-right photo shows a modern skyscraper. The bottom-left photo shows a suburban house with a striped awning. The bottom-right photo shows a traditional house with a windmill. Below the frame, the text "U.S. Department of Commerce" and "BUREAU OF THE CENSUS" is printed in a smaller, sans-serif font. The entire cover is set against a light background.

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